



DOWNTOWN SCOTTSDALE
FIRE STATION 2





Downtown Scottsdale Fire Station 2 is located in the heart of Old Town Scottsdale, an area that has seen tremendous growth and revitalization through private and public investment in recent years. The 12,000-square-foot fire station was designed to pursue a LEED (Leadership in Energy and Environmental Design) Gold certification as part of the City of Scottsdale's green building initiative.

The two-story facility will meet the daily operational needs of the fire department and the community, while utilizing passive and active sustainable green building principles to maximize sustainability and enhance overall energy performance.

Station features include three apparatus bays, a utility shop, decontamination area, turn-out room, laundry area, crew and captain offices, dayroom, kitchen, dorms, physical conditioning area, and various other support spaces. The building also includes an exterior deck that overlooks Indian School Road, shaded patio areas, and a community room with a connecting courtyard space for public use.

Scottsdale Fire Department has a goal of arriving on the scene of an emergency within four minutes or less 80% of the time. The new station's location will provide faster fire and medical response to the 68th Street corridor, parts of downtown, and the more mature areas of the city's western border. Downtown Scottsdale Fire Station 2 houses emergency response crews and a Battalion Chief.

Quick Facts

Construction Cost
\$4,826,900

Building Size
12,000 sq. ft.

Parcel Size
1.2 acres

Completion Date
June 2008

Location
7522 E. Indian School Road
Scottsdale, AZ 85251

Owner
City of Scottsdale

Architect
LEA Architects, LLC
Phoenix, Arizona

General Contractor
Sun Eagle Corporation
Chandler, Arizona

For More Information
Scottsdale Fire Department
(480) 312-FIRE (3473)

Green Building Features

Energy Efficiency

- The building utilizes solar modeling to minimize direct sun in the summer while maximizing heat gain in the winter.
- Energy efficiency is enhanced with high performance windows and overhangs that shade the building.
- North-facing vertical clerestory windows are utilized in the kitchen to provide daylight and reduce the need for artificial lights.
- Natural daylight and views are provided to 95% of all occupied spaces.
- Solar light tubes are installed in the upstairs hallways to provide natural light to an area that normally would have limited access to daylight.
- Light sensors monitor natural daylight in offices and automatically dim, reducing the need for electrical lighting while maintaining a consistent amount of light throughout the day.
- Passive thermal heating of the apparatus bays will be achieved during the winter through the collection of heat from the south facing windows and weathered steel roof.

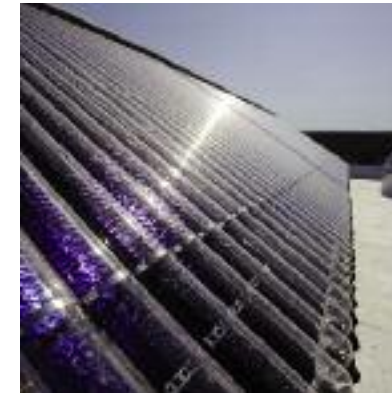


solar tubes (hallway)



solar tubes (roof)

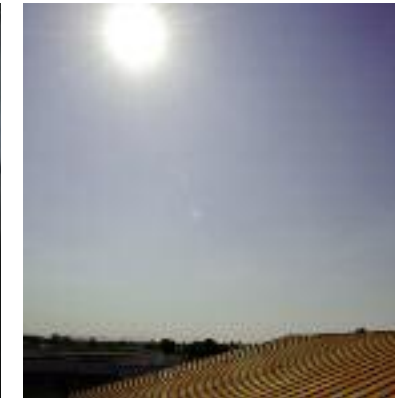
solar panels
cooling tower
south facing vertical windows



floor made from recycled tires
weathered steel roof
storm water retention



clerestory windows
shade awnings
rain harvesting gutters





Renewable Energy

- Renewable energy sources are provided through photovoltaic and solar hot water panels.
- Photovoltaic panels harvest the sunlight energy and convert it to electrical power.
- Solar hot water panels on the roof heat water and send it to a storage tank for domestic water and space heating purposes.

Water Efficiency

- Wastewater (grey water) from sinks and showers is collected, stored, and reused for landscape irrigation resulting in a significant water savings.
- Overall water use is reduced through the use of high efficiency plumbing fixtures, including a waterless urinal and dual-flush toilets.

Sustainable Site

- Shade trees in conjunction with pervious concrete pavers reduce the site's heat island effect.
- Pervious pavers, rain harvesting gutters, and dry wells contribute to 100% storm water retention and assist in preventing storm water run-off from the site.
- Water collected from the roof travels down architectural gutters and is directed to one of two underground cisterns.

concrete floors



pervious pavers



energy efficient appliances



Indoor Environmental Quality

- Ground concrete flooring was used to reduce the environmental footprint. The floors will require minimal maintenance and are expected to last for the life of the building, thus reducing ownership costs.
- Natural ventilation is provided through operable windows and enhanced mechanical systems with improved filtration media.
- Low carbon-emitting materials were specified and used during construction, including adhesives, sealants, paints, carpet, and wood.

- Individualized temperature controls are provided for all firefighter dorms and offices to maximize efficiency and improve the overall thermal comfort for the building occupants.
- The flooring in the physical conditioning area is made from recycled tires.
- Prior to occupancy, the building was flushed for two weeks with outside air to improve indoor air quality by removing any remnants of construction dust, odor, particulate matter, and contaminants.

Materials and Resources

- Natural materials were used including locally manufactured ground face concrete masonry, Arizona sandstone, glass, and weathering steel.
- Recycled content makes up 31% of the total value of building materials. This reduces the amount of materials sent to landfills and uses significantly less energy to produce.
- 73% of the total value of lumber is certified green ensuring that the lumber was harvested from managed forests to minimize the negative environmental impacts of logging.
- 76% of the building materials and products were manufactured regionally (less than 500 miles from jobsite). This reduces the amount of fossil fuels used in the transportation of building materials and helps to support the local economy.
- 575,860 lbs. (94%) of construction waste was diverted from conventional landfills and routed to a recycling agency for post-consumer use.
- Collection bins for recyclable materials are provided for the general public and city staff using the facility.



FIRE DEPARTMENT

8401 E. INDIAN SCHOOL ROAD
SCOTTSDALE, AZ 85251

